What is claimed is:

- A biodegradable resin having a functional group forming a thermo-reversible cross-linked structure which is covalently bonded by cooling and cleaved by heating.
- 2. The biodegradable resin according to Claim 1, wherein said covalent bond is of at least one mode selected from the group consisting of Diels-Alder type, nitroso dimer type, acid anhydride ester type, halogen-amine type, urethane type, azlactone-hydroxyaryl type and carboxyl-alkenyloxy type.
- 3. The biodegradable resin according to Claim 1 or 2, wherein said functional group is at least one group selected from the group consisting of a hydroxyl group, carboxyl group, amino group, hydroxyaryl group, alkenyl group, alkenyloxy group, nitroso group, halogen, group having a conjugated double bond, group having an acid anhydride structure, group having an isocyanate structure, and group having an azlactone structure.
- 4. The biodegradable resin according to Claim 1, wherein said functional group forms said thermo-reversible cross-linked structure which is covalently bonded at a temperature for use as a molded article and cleaved at temperatures over 120°C and equal to or lower than the molding temperature.
- 5. The biodegradable resin according to Claim 4, wherein said covalent bond is at least one of a Diels-Alder type and carboxyl-alkenyloxy type.
- 6. The biodegradable resin according to Claim 4 or 5, wherein said functional group is at least one group selected from the group consisting of a hydroxyl group, carboxyl group, alkenyl group, alkenyloxy group, and group having a conjugated double bond.
- 7. The biodegradable resin according to any of Claims 1 to 6, wherein said biodegradable resin includes polyesters having at least one functional

group selected from the group consisting of a hydroxyl group, carboxyl group and amino group, and modified bodies of the polyesters.

- 8. The biodegradable resin according to any of Claims 1 to 6, wherein said biodegradable resin includes polyamino acids having at least one functional group selected from the group consisting of a hydroxyl group, carboxyl group and amino group, and modified bodies of the polyamino acids.
- 9. The biodegradable resin according to any of Claims 1 to 6, wherein said biodegradable resin includes polysaccharides having at least one functional group selected from the group consisting of a hydroxyl group, carboxyl group and amino group, and modified bodies of the polysaccharides.
- 10. The biodegradable resin according to any of Claims 1 to 6, wherein said biodegradable resin includes polyols having at least one functional group selected from the group consisting of a hydroxyl group, carboxyl group and amino group, and modified bodies of the polyols.
- 11. The biodegradable resin according to any of Claims 1 to 10, wherein said biodegradable resin has a three-dimensional cross-linked structure, and the cross-linked density of said three-dimensional cross-linked structure is 0.0001 to 1.
- 12. The biodegradable resin according to any of Claims 1 to 11, wherein the main chain of said biodegradable resin has at least one of a linear structure and branched structure.
- 13. The biodegradable resin according to any of Claims 1 to 12, wherein one or more of said functional groups are present at the same site, at at least one of the end and side chain of said biodegradable resin.
- 14. The biodegradable resin according to any of Claims 1 to 13, wherein an electrostatically bondable and thermo-reversible cross-linked structure is used together.

- 15. A biodegradable resin composition comprising a first biodegradable resin having a first functional group forming a thermo-reversible cross-linked structure which is covalently bonded by cooling and cleaved by heating,
- and a second biodegradable resin having a second functional group forming a thermo-reversible cross-linked structure which is covalently bonded with said first functional group by cooling and cleaved by heating.
 - 16. The biodegradable resin composition according to Claim 15, wherein said first functional group and said second functional group are identical.
 - 17. A biodegradable resin composition comprising a first biodegradable resin having a first functional group forming a thermo-reversible cross-linked structure which is covalently bonded by cooling and cleaved by heating,
- and a linker having a second functional group forming a thermo-reversible cross-linked structure which is covalently bonded with said first functional group by cooling and cleaved by heating.
 - 18. The biodegradable resin composition according to Claim 17, wherein said linker has two or more identical second functional groups.
 - 19. A biodegradable molded body comprising the biodegradable resin according to any of Claims 1 to 14 or the biodegradable resin composition according to any of Claims 15 to 18.
 - 20. A method of producing a biodegradable resin comprising a step of reacting a cross-linking agent having a structure of the covalent bond of a first functional group and a second functional group, which is covalently bonded by cooling and cleaved by heating, and a third functional group, with a
- 5 biodegradable resin material having a site reacting with said third functional group.

21. A method of producing a biodegradable resin comprising a step of cross-linking a first biodegradable resin having a first functional group forming a thermo-reversible cross-linked structure which is covalently bonded by cooling and cleaved by heating, with a linker having two or more second functional groups forming a thermo-reversible cross-linked structure which is covalently bonded with said first functional group by cooling and cleaved by heating.